Human Fc epsilon RI alpha Protein, Fc Tag (MALS & BLI verified)

Catalog # FCA-H5259

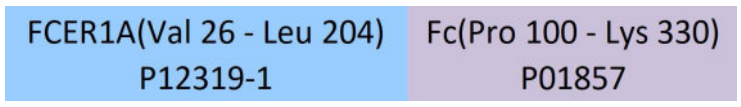
Synonym

FCER1A,FCE1A,FcERI

Source

Human Fc epsilon RI alpha, Fc Tag(FCA-H5259) is expressed from human 293 cells (HEK293). It contains AA Val 26 - Leu 204 (Accession # P12319-1).
Predicted N-terminus: Val 26

Molecular Characterization



This protein carries a human IgG1 Fc tag at the C-terminus.

The protein has a calculated MW of 47.3 kDa. The protein migrates as 60-75 kDa when calibrated against Star Ribbon Pre-stained Protein Marker under reducing (R) condition (SDS-PAGE) due to glycosylation.

Endotoxin

Less than 1.0 EU per μg by the LAL method / rFC method.

Purity

>95% as determined by SDS-PAGE.

>95% as determined by SEC-MALS.

Formulation

Lyophilized from 0.22 μm filtered solution in Tris with Glycine, Arginine and NaCl, pH7.5 with trehalose as protectant.

Contact us for customized product form or formulation.

Reconstitution

Please see Certificate of Analysis for specific instructions.

For best performance, we strongly recommend you to follow the reconstitution protocol provided in the CoA.

Storage

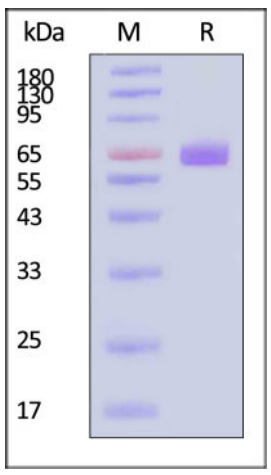
For long term storage, the product should be stored at lyophilized state at -20°C or lower.

Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

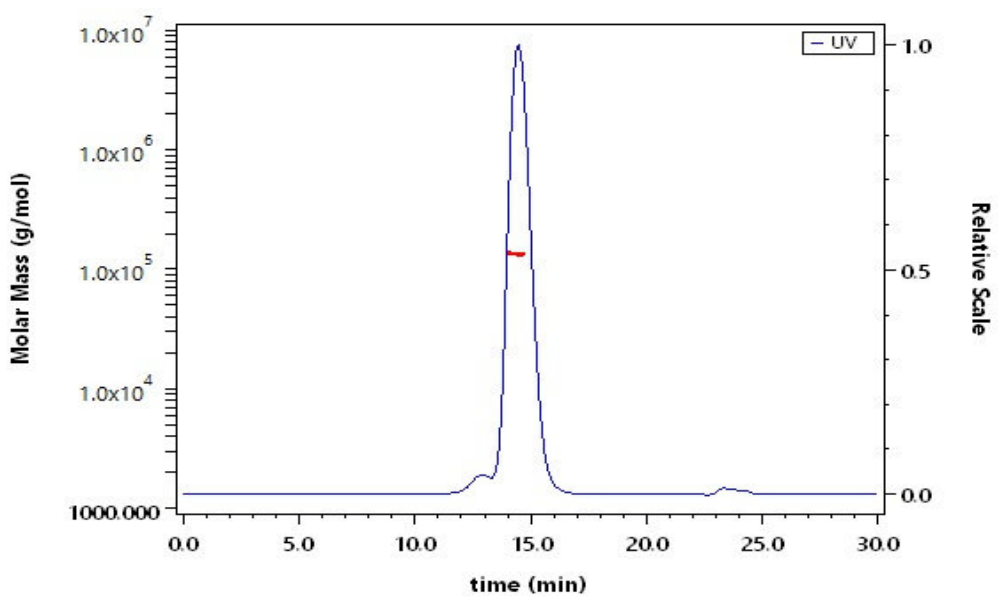
- -20°C to -70°C for 12 months in lyophilized state;
- -70°C for 12 months under sterile conditions after reconstitution.

SDS-PAGE



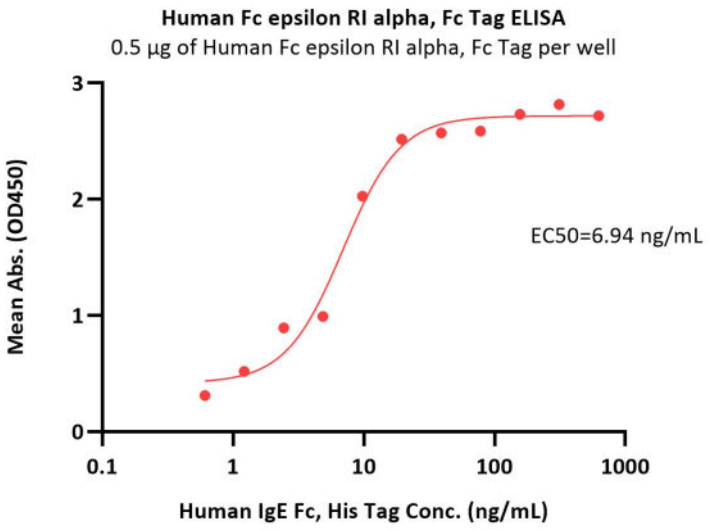
Human Fc epsilon RI alpha, Fc Tag on SDS-PAGE under reducing (R) condition. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95% (With Star Ribbon Pre-stained Protein Marker).

SEC-MALS



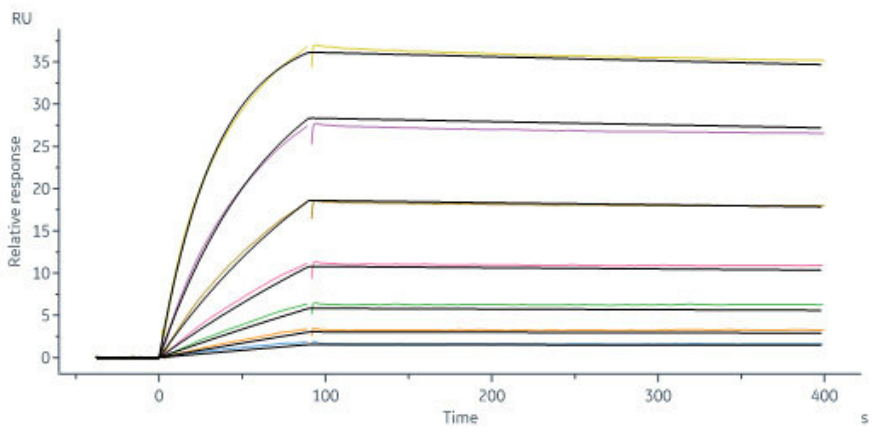
The purity of Human Fc epsilon RI alpha, Fc Tag (Cat. No. FCA-H5259) is more than 95% and the molecular weight of this protein is around 125-135 kDa verified by SEC-MALS.
Report

Bioactivity-ELISA



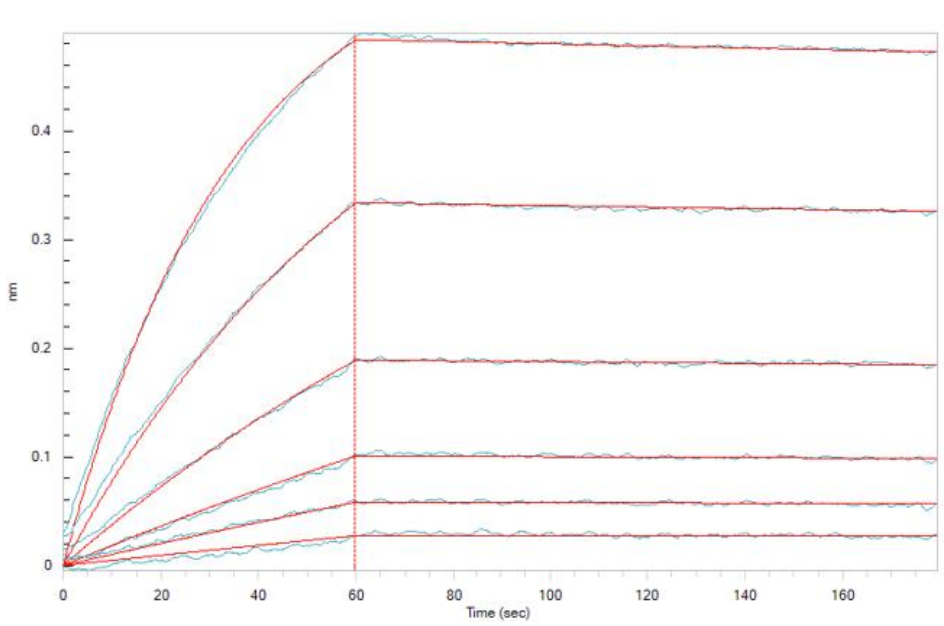
Immobilized Human Fc epsilon RI alpha, Fc Tag (Cat. No. FCA-H5259) at 5 μg/mL (100 μL/well) can bind Human IgE Fc, His Tag (Cat. No. IGE-H52H9) with a linear range of 0.6-20 ng/mL (Routinely tested).

Bioactivity-SPR



Human Fc epsilon RI alpha, Fc Tag (Cat. No. FCA-H5259) immobilized on CM5 Chip can bind Human IgE Fc, His Tag (Cat. No. IGE-H52H9) with an affinity constant of 0.585 nM as determined in a SPR assay (Biacore 8K) (Routinely tested).

Bioactivity-BLI



Loaded Human Fc epsilon RI alpha, Fc Tag (Cat. No. FCA-H5259) on AHC Biosensor, can bind Immunoglobulin E, Human Plasma with an affinity

constant of 0.696 nM as determined in BLI assay (ForteBio Octet Red96e) (QC tested).

Background

High affinity immunoglobulin epsilon receptor subunit alpha (FCER1A) is also known as Fc-epsilon RI-alpha (FcERI), IgE Fc receptor subunit alpha, FCE1A. FCER1A contains two Ig-like (immunoglobulin-like) domains. FCER1A binds to the Fc region of immunoglobulins epsilon and is a high affinity receptor. FCER1A is responsible for initiating the allergic response, which binding of allergen to receptor-bound IgE leads to cell activation and the release of mediators (such as histamine) responsible for the manifestations of allergy. The same receptor also induces the secretion of important lymphokines. FCER1A plays a central role in allergic disease, coupling allergen and mast cell to initiate the inflammatory and immediate hypersensitivity responses that are characteristic of disorders such as hay fever and asthma.